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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,889	10/21/2003	Tetsuya Yoshikawa	244188US3X	2764
22850 7590 12/14/2007 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER RIGGLEMAN, JASON PAUL	
			ART UNIT 1792	PAPER NUMBER
			NOTIFICATION DATE 12/14/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/688,889	<b>Applicant(s)</b> YOSHIKAWA ET AL.	
	<b>Examiner</b> Jason P. Riggelman	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-6, 14-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-9, 13 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Status of Claims***

Applicant's reply filed on 10/3/2007 is acknowledged. Current pending claims are 1-9 and 13-20. Claims 7, 9, and 13 are amended. Claims 1-6 and 14-19 are withdrawn. Claim 20 is new. Claim 8 is original.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-9, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amada et al. (JP-63073626) in view of Worm et al. (US Patent Application Publication No. US2003/0049937).

Amada et al. teaches a high-pressure processing apparatus having a high pressure chamber adapted to contain a wafer. The high pressure chamber has an introduction wall provided with a fluid introduction passage. There is a mounting table and a rotating mechanism which rotates the wafer and mounting table. A fluid dispersion mechanism dispersing the fluid supplied from the fluid introduction passage. A fluid discharger (Note: arrows parallel to wafer in Fig. 2) to distribute the fluid supplied from the fluid dispersion mechanism "outward" along the surface of the wafer and discharged outside the high pressure chamber. The fluid dispersion mechanism

includes a closure plate formed with a plurality of holes. The closure plate is located between the mounting table and the introduction wall (opposed). It should be noted that the fluid supplier could be adapted to supply a supercritical or subcritical fluid. The fluid discharger includes a fluid discharge passage provided in a sidewall of the high pressure chamber at an outward position relative to the processing object and approximately parallel to the surface of the wafer.

Amada et al. does not teach a gap formed between the closure plate and the introduction wall and that the closure plate is opposed to the entire surface of the wafer; however, Worm et al. teaches a supercritical CO<sub>2</sub> processing system having shower spray member which has a gap (622) formed between a closure plate and an introduction wall which is opposed to the entire surface of the wafer, Fig. 26. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Amada et al. with Worm et al. to create a shower which effectively treats the *entire top surface* of the wafer *uniformly* with fluid to achieve the expected result.

In regards to claim 13, Amada et al., as modified by Worm et al., does not teach that the through holes are formed concentrically and that the density of holes (of same size) is higher near the center of the plate; however, Worm et al. further teaches a plate with distribution holes which are concentrically formed and are more dense near the center, Fig. 26, paragraph [0248]. Note: the holes lie along concentric circles coinciding with the center of the plate and wafer (see phantom circle 660 in Fig. 29). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Amada et al., as modified above with Worm et al., with Worm et al. to create a shower

which effectively treats the *entire top surface* of the wafer *uniformly* with net fluid flow towards to periphery of the wafer to achieve the expected result when discharging the contaminated liquid in a radial direction toward the periphery of the wafer during rotation.

### ***Response to Arguments***

Applicant's arguments with respect to claims 7-9, 13, and 20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

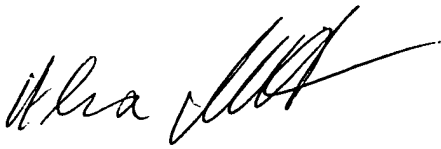
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P. Riggleman whose telephone number is 571-272-5935. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Jason P Riggleman  
Examiner  
Art Unit 1792

ALEXANDER MARKOFF  
PRIMARY EXAMINER

JPR